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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,778	10/15/2004	Yoshiro Miyazaki	OPS C-658	6602
23474	7590	07/18/2006	EXAMINER	
FLYNN THIEL BOUTELL & TANIS, P.C. 2026 RAMBLING ROAD KALAMAZOO, MI 49008-1631			DATSKOVSKIY, MICHAEL V	
			ART UNIT	PAPER NUMBER
			2835	

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/511,778

Applicant(s)

MIYAZAKI ET AL.

Examiner

Michael V. Datskovskiy

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 07/05/2006 have been fully considered but they are not persuasive. Examiner does not agree with applicant's assertion that neither in the computer by Kobayashi nor in the computer by Sauciuc et al an oscillating heat pipe would reciprocate cooling fluid a plurality of times between a heat generating electronic component in the main unit and a heat dissipating part in the display part of the computer. Each of the devices comprises an oscillating heat pipe, which by definition reciprocates cooling fluid back and forward between heating part and cooling part (evaporator and condenser in a closed loop), and does it without any outside pump (self-excited). It is not understandable, why applicant's device would do it and devices mentioned above wouldn't. Regarding to the applicant's assertion that the reference by Smyrnov does not disclose a computer examiner directs applicant's attention to the Fig. 11, and its description in col. 8, lines 17-26, wherein Smyrnov discloses a cooling structure using an oscillating heat pip in a manner and in a design very similar to a portable computer using such a cooling structure.

2. However, due to the amendment, applicant's arguments with respect to claims 13-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 21, 22, 13, 17, 19, 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Sauciuc et al.

Sauciuc et al teach a computer, Fig. 4, comprising: a main unit 30 provided with a CPU 31; a display unit 33; a connection part for foldable connecting the main unit with the display unit; and a self-excited oscillation heat pipe 38 for removing heat from the CPU and transferring it to the display unit; wherein the self-excited oscillation heat pipe is in thermal communication with a heat source in the CPU and a radiation side in the display unit, passes in a reciprocating fashion a plurality of times between the CPU and the display unit via the connection part 44 and has plural portions reciprocating at the connection part which are flexible (paragraphs [0019] – [0025]). Sauciuc et al teach furthermore said portable computer comprises a plurality of cooling fans 12 on the radiation surface provided on the backside of the display unit 33.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 14-16, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sauciuc et al.

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Sauciuc et al teach all the limitations of the claims except: at least a part of a conduit constituting the container of the self-excited oscillation heat pipe has a coiled shape (claim 14); or a waved bent shape (claim 15); or a bellow shape (claim 16). It would have been obvious to one ordinary skilled in the art at the time invention was made to employ a flexible part of a self-excited oscillation heat pipe conduit container having a shape of a coil or bellow or wave bent shape, since applicant has presented no evidence that the particular configuration of the conduit part is significant or is anything more than one of numerous configurations a person of ordinary skill in the art would find obvious. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Regarding to claim 18: Sauciuc et al teach all the limitations of the claim except: at least a part of the container of the self-excited oscillation heat pipe is constituted by super elastic alloys or super elastic plastic alloys: It would have been obvious to one having ordinary skill in the art at the time invention was made to employ a heat pipe made of super elastic alloys or super elastic plastic alloys, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

7. Claim 18 is also rejected under 35 U.S.C. 103(a) as being unpatentable over Sauciuc et al as applied to claims 21 and 17 above, and further in view of Scherbaum (US Patent 4,023,616).

Sauciuc et al teach all the limitations of the claim except: at least a part of the container of the self-excited oscillation heat pipe is constituted by super elastic alloys or super

elastic plastic alloys: Scherbaum teaches a heat pipe 11, Figs. 1, 2, comprising a corrugated flexible tube section 11d made of elastic copper alloy (col. 3, lines 15-46). The limitation that such alloy should be “super” elastic has not been given patentable weight, since applicant has not disclosed particular requirements to the alloy being “super” elastic instead or just elastic. It would have been obvious to one having ordinary skill in the art at the time invention was made to employ a heat pipe made of elastic alloy as Scherbaum discloses it in the device by Sauciuc et al, in order to enhance durability of the heat pipe.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V. Datskovskiy whose telephone number is (571) 272-2040. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael V Datskovskiy  
Primary Examiner  
Art Unit 2835

07/12/2006